INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. The Treatment of Erysipelas according to the Method of Kraske-Riedel. By C. LAUENSTEIN (Hamburg). In 1886, Kraske treated three cases of erysipelas in the following manner: After carefully cleansing and disinfecting the affected region, he made numerous small punctures and incisions in the erysipelatous zone and around its margins, and caused as much exudation of blood and serum as possible. The affected part was then dressed with compresses of 2% carbolic acid, which compresses were changed twice a day.

In 1887 Riedel slightly modified this procedure in so much as he only scarifies the margins of the process, and makes numerous fine parallel incisions, which scarcely draw blood, and thus marks out or limits the inflammation, and instead of carbolic compresses he uses 1 to 1000 bichloride, which is renewed three times a day.

Dr. Lauenstein has treated five cases in this manner, with gratifying results, and states that the redness and constitutional symptoms disappear rapidly, and that it is seldom necessary to repeat the incision for a second time.—*Deutsch. medicinische Wochenschrift*, No. 11, 1889.

F. C. HUSSON (New York).

II. The Etiology of Tetanus. By A. VERNEUIL (Paris). The author dwells upon the virulence of soil contaminated by the dejections of tetanic horses. He insists on the frequency of tetanus in wounds of the lower extremities; thus, in Havana, out of 162 patients suffering from tetanus, 132 contracted it from wounds on the legs and feet. The disease is frequent in persons who, after being wounded, get in contact with the soil, as in cases of comminuted fracture, in which the bones are forced into the ground, and crushing of the bare feet; also when earth is used as dressing, and when the wound is inflicted by an agricultural implement. Experiments made with ordinary soil and soil known to be contaminated strongly support this view. Certain soils seem to preserve their virulence much longer than others, and stagnant water appears to favor the proliferation of the microbe. —*London Med. Rec.*, April, 1889.

III. Acute Infectious Osteomyelitis. By PROF. ALEXANDER S. BOBROFF (Moscow). In the course of the last three years the author met with 10 cases of acute infectious osteomyelitis which was localized in 5 in the femur (in 4 at the lower end, in 1 in the diaphysis), in 3 at the upper epiphysis of the humerus, in 1 in the whole tibia (starting from the lower end) and in 1 in the calcaneus. The patients were 9 boys, æt. from 12 to 19, and a woman æt. 26. The author draws attention to the general fact that osteomyelitis occurs mostly in young subjects and attains most frequently the epiphysis of long bones, the first place being occupied by the lower end of the femur, the next by the upper extremity of the humerus, and a third by that of the tibia. Those clinical facts are thought to be easily explained on the ground of certain anatomical and physiological peculiarities existing during the period of active growth of bones. As is known, the medullary cavity and spongy substance of the epiphyses derives its blood supply from the nutrient arteries which on their entering into the canal break into an extensive net-work with a relatively retarded circulation. The retardation reaches its maximal degree about the epiphyseal cartilage, near which a very active formation of new capillaries with sac-like protrusions is incessantly going on. Any foreign bodies, including pathogenic microbes, may easily get entangled in such recesses with their slackened and stagnating blood-current, to give rise to inflammation of corresponding nature (of suppurative character in the case of pyogenic microbes, etc.). The same localized stagnation of the blood-current may also explain a relatively greater frequency of osteomyelitis in one epiphysis comparatively with the other. Thus, in the case of the femur the lower epiphysis is attacked more often than the upper, because the circulation in the former is by far slower than in the latter, which depends upon both of the nutrient arteries entering into the medullary cavity in an upward direction, the arrangement determining a more active blood-supply of the upper portion of the bone, as well as its better nutrition, a more rapid ossification precluding the said sacciform dilatations of the capillaries, etc. The same holds true. *mutatis mutandis*, in regard to other bones. Passing to the etiology of the disease, Dr. Bobroff lays down the proposition that it is caused by the agency of the *staphylococcus pyogenes aureus* which penetrates into the medullary cavity along the venous system, the starting point being either the skin or respiratory organs. Of predisposing causes, the author admits only two: *a*, the pre-existence of a superficial focus (abscess, boil) containing great numbers of the staphylococci; and *b*, a more or less considerable traumatic local injury leading to some disturbance in the osseous circulation (traumatic lesion preceded the attack in 6 out of the author's 10 cases). Exposure to cold is said to have no etiological significance whatever. The treatment should be rapid and energetic. It should consist in a possibly early trephining of the diseased bone with thoroughly scraping out the bone marrow, washing out the wound with a corrosive sublimate lotion (1 to 1000), plugging the cavity with iodoform gauze, inserting a drainage tube, suturing the incision, and applying an antiseptic dressing. An early trephining with *débridement* is stated: 1, to prevent a general infection of the patient's system; 2, to prevent any extensive separation of the periosteum with consecutive necrosis; and 3, to shorten the period of convalescence. When performed under antiseptic precautions, the operation is void of any risk or unpleasant complications. As a matter of fact, of Dr. Bobroff's 10 patients, one in whom no operative treatment had been resorted to, died on the fifth day of the disease; of 3 in whom the treatment had been limited to opening abscesses, 2 died, 1 recovered, though exceedingly slowly. In the remaining 6, trephining with scraping out the marrow was performed. Only one of them (the woman) died, while 5 recovered, recovery advancing the more rapidly the earlier the operation was resorted to.—*Khirürgitchesky Vestnik*, April and May, 1889.

VASCULAR.

1 **Ligature of External Carotid for Traumatic Hæmorrhage; Penetrating Stab-wound of Abdomen with Prolapse of Omentum.** By GRIGORY V. URAZOFF (Djebrail, Russia). A Causasian mountaineer, æt. 28 years, was stabbed with a knife in the abdomen and face, and lost a good deal of blood from the facial wound. On examination, 24 hours later, there was found a piece of the omentum, of the size of a male hand, 'protruding from a wound situated about the end of the left twelfth rib. Having washed out the parts, the author tied the omentum with four ligatures, divided the pedicle above them, returned the stump into the abdomen and closed the wound with three deep sutures. On the face there was present a gaping, irregular wound in front of the left tragus, on the level of the lower edge of the zygomatic arch. There was no bleeding at the time. The cut was washed out and left alone. On the eighth day a profuse arterial hæmorrhage took place suddenly. It recurred twice in the course of the next twelve days. An examination on the twentieth revealed that both the temporal and external carotid had been injured. The patient's general state being almost hopelessly bad from enormous losses of blood, Dr. Urazoff tied the caroted below the hypoglossa nerve, but "somewhat higher up from the lingual artery." A hygroscopic wool pledget was inserted into the lower angle of the incision, and its remaining portion closed with four sutures. All the three wounds gradually healed, and the man recovered, though exceedingly slowly.—*Proceedings of the Caucasian* (*Tiflis*, *Medical Society*, 1889, No. 15).

VALERIUS IDELSON (Berne)

HEAD AND NECK.

1 **Compression of the Brain and Spinal Cord.** By DR. ADAMKIEWICZ (Vienna). Formerly it was assumed as an axiom, that brain-tissue was practically incompressible, and the symptoms caused by increase of the intracranial pressure were supposed to be due to cerebral anæmia. Experiments on animals, however, prove that these suppositions are wrong. For the volume of the brain can be di-

minished by pressure, and this diminution is not due to narrowing of the blood-vessels, but to the displacement of fluid from the cerebral tissue into the subarachnoid space, and thence into the cord and the lymphatics and veins of the neck. When the pressure is below a certain limit, but yet sufficient to materially lessen the bulk of the brain, the cerebral blood-vessels actually dilate. The dilated vessels supply sufficient nutriment to the compressed tissue, and there is no functional disorders of the parts of the brain involved. When the pressure is below the limit at which functional disorders appear, our author considers the compression to be of the first degree. In compression of the third degree there are visible breaches of continuity; in other words, the brain is crushed or bruised. Between compression which causes no functional disorders, and compression which produces structual lesions, lies compression of the second degree, in which the damage done to the tissues is said to be molecular or dynamical, because it cannot be detected by the microscope. While compression of the second degree lasts, there are pronounced functional disorders, but complete functional restitution follows on the removal of the compressing force. Adamkeiwicz found in animals that when the compression just attained to the second degree, irregular attacks of clonic spasms of the opposite side of the face and opposite limbs (contralateral hemiclonus) appeared. As the pressure was increased, hemispasm was replaced by hemiplegia, muscular contraction and exaggerated tendon reflexes. Paraplegia followed hemiplegia, and spastic tremors and paralytic trembling were observed as the compression approached and passed into the third degree. In man, as is well known, cerebral tumors may remain latent, or give rise to hemispasm, hemiplegia, paraplegia and spastic phenomena. In our author's terminology, cerebral tumors cause compression of the first and second degree. Adamkiewicz has cited elsewhere cases to illustrate the disappearance of hemispasm and hemiplegia when the tumor or other cause of increased intracranial pressure was removed. In the following extraordinary case he was enabled to observe the immediate effects of compression on the human brain.

A young countryman had a large soft sarcoma removed from the top of his head. The tumor had eaten through the bone, and by the operation the dura mater was exposed over an area of twelve to eight centimetres. The hole in the skull was filled with a firm tampon, and on this a board was placed to support weights. The greater part of the tampon was forced within the cranium, but no symptoms were produced by placing a weight of seven kilogrammes on the board. Hence in man, as in animals, when the brain is compressed to a certain degree, its volume is diminished, but no functional reaction ensues. Other observations of the author confirm this result. To return to the case under consideration: A few weeks after the first operation, a second was undertaken to remove the tissues infiltrated by the growth. The longitudinal sinus was opened, and great pressure had to be applied to stop the hæmorrhage. As long as the patient remained fully under the anæsthetic all that was noticed was that the breathing was stertorous and irregular. But half an hour after the application of the compress paroxysmal attacks of screaming set in. A hemispasm accompanied each screaming fit. The hemispasm was confined to the left arm and leg, and consisted of rapid flexions. The closed fist was drawn toward the forearm and the forearm hurled toward the upper arm. In the lower limb the movements were confined to the hip and knee-joints. Each fit lasted two or three seconds, and the interval between two consecutive fits was four or five minutes. The patient died about an hour after the operation. At the autopsy it was found that the superior parietal lobules had been injured by the surgeon's knife, and that the upper third of the ascending frontal convolution and posterior part of the first frontal on the right side were so flattened that the furrows were completely obliterated. The corresponding region on the left side was flattened, but not to the same degree or extent. Adamkiewicz argues that the flattening was due to the pressure of the compress, and the hemispasm was caused by the compression of the upper right motor region in front of the fissure of Rolando. He concludes that there are three degrees of compression of the human brain, characterized by the same phenomena which he observed in his experiments on animals.

Compression of the spinal cord has been supposed to cause myelitis by producing anæmia. and consequently disorders of nutrition and necrosis. But Adamkiewicz finds that this fundamental premise of the doctrine of the so-called compression myelitis is false. He shows that in man tumors may alter the shape and lessen the volume of portions of the cord without causing any functional disturbance, and, therefore, without materially interfering with the nutrition of the compressed tissue. In rabbits he introduced slips of laminaria between the dura mater and wall of the spinal canal, and thereby not only altered the outline and diminished the volume of the adjacent parts of the cord, but greatly deflected the paths of the nerve-fibres. In spite of this, the normal functions of the cord were performed for months. Hence, compression of the cord, which stops short of bruising, causes neither anæmia nor inflammation. Myelitis associated with compression is not due to pressure, but to the simultaneous presence of irritants, such as the products of caries of the vertebræ. A case of spinal curvature is related as an example of compression of the second degree. The lower cervical and upper dorsal regions were involved in the curvature, and the symptoms were paraplegia and slight vaso-motor disorders. As there were no indications of caries, no affections of the sensory nerves, no changes in the reflexes or electrical reactions, nor the slightest bladder or rectal trouble, it was supposed that there was neither myelitis nor any break in the continuity of the tissue. When the patient was suspended from the axillæ an immediate improvement in the movements of the legs took place, and the paraplegia became directly as bad as ever when the suspension was interrupted and the weight of the body no longer tended to straighten the curved column. —*Wien. Med. Woch.*, Nos. 41, 42, 43, 1888.

II. Resection of the Upper Jaw with the Greatest Possible Preservation of the Soft Parts. By Dr. L. HEUSNER (Barmen). All methods now in vogue for resection of the upper jaw produce a more or less amount of multilation or deformity of the soft parts, and in order to obviate this the author has employed the following method: After a preliminary tracheotomy and introduction of a tampon canula, an incision is made along the lower border of the orbit, similar to the one used for resection of the infra-orbital nerve, only a little longer. This $3^1/_2$ cm. long incision, the only one used, has the advantage of dividing the soft parts when they are very thin and contain but few blood vessels and few branches of the facial nerve. The second step of the operation is the opening of the infra-orbital canal in order to expose and release the infra-orbital artery and nerve; to accomplish this the soft parts of the orbit, together with the periosteum, are pushed backward. The third step is the dissecting off of the soft parts covering the upper jaw, and to do this we begin by dissecting the gums away from the upper lip, up to the margin of the orbit, taking care not to divide the infra-orbital nerve; the dissection is carried out partly from the mouth and partly from the facial incision, so that the jaw is free from the nasal bridge on one side to the zygoma, and maxillary tuberosity on the other. This step terminates with the separation of the soft parts of the gums in the usual manner. The fourth and last step of the operation consists in separating the upper jaw from its bony connections; first the processus nasalis is cut through by passing from the infra-orbital wound a strongly curved needle armed with a chain saw through the lamina papyracea into the nose, and drawing it out at the nostril; then the bone is sawn through, while the overlaying soft parts are protected by an elevator. Then the zygomatic process is also sawn subcutaneously by a chain saw being passed from the external angle of the infra-orbital wound through the infra-orbital fissure into the mouth, the angle of the mouth being drawn up and protected during the sawing. After this the palatine process is sawn through the nostril with a key-hole saw. By a few blows of a chisel and hammer on the infra-orbital wall the jaw is separated from the lachrymal bone, and the pterygoid process, and can be drawn into the mouth and completely removed by means of the scissors. After the hæmorrhage has been stopped the operation field can be looked over for any portions of tumor left behind, and these easily removed. The wound is then packed with iodoform gauze.—*Deutsche Medicin. Wochen.*, No. 8, Feb. 21, 1889.

F. C. HUSSON (New York).

III. Contribution to the Statistics of Tumors of the Jaw. By Dr. EUGEN BIRNBAUM (Berlin). In this paper there is presented a statistical compilation of all the tumors of the upper or lower jaw occurring in the material of Prof. Küster's clinic, Berlin, from 1871 to 1887 inclusive. There are 63 tumors described, 42 of the upper and 21 of the lower jaw. Of the 42 tumors of the upper jaw 19 are carcinomata, 15 sarcomata, 2 adenomata, 2 fibromata, 3 cysts and one specific new growth. Ten of those of the lower jaw are carcinomata, 7 sarcomata, 3 cysts and one osteoma. In 13 carcinomatous tumors of the upper jaw the growth originated from the body of the jaw. In 6 cases it started from the alveolar process. In the lower jaw 4 carcinomatous growths started from the body and 6 from the aveolar process. The carcinomata occurred at the ages of 55 to 80 years. In the upper jaw the sexes were about equally effected. Etiologically we have heredity (2), traumatism (1), tobacco indulgence (3), caries of bone. The operations performed for removal of tumors, carcinomata, of the upper jaw were various. There were 17 total resections. In 5 cases of carcinoma the lower jaw was partially resected. Of 25 cases operated upon only 8 had an uncomplicated recovery. The accidents recorded in other cases are secondary hemorrhage (2), collapse (2), gangrene (5), erysipelas (1), carcinomatous affection of breast, (1). Six cases died as a result of operation. In no case did the operation cure permanently. One patient, however, remained free from a return 6 years. The rest presented a return of their disease at intervals varying from 2 months to 2 years. Five cases of return of carcinomatous disease in the upper jaw were operable, the recurrence existing from 2 weeks to 8 months before operation. One case of return of carcinoma in the lower jaw was operated. In all the above cases of carcinoma the average duration of freedom of the patient from recurrence was 9$^1/_2$ months.

The *sarcomata* included 5 of the upper jaw (body), one of the processus palatinus, and 9 of the alveolar process. The lower jaw includes 3 tumors starting from the body and 3 from the alveolar process. Histologically the tumors are grouped as follows: Upper jaw, 4 spindle celled sarcomata, 7 gaint celled and 2 round celled sarcomata. The lower jaw, 2 spindle celled, 3 gaint celled and 1 round celled sarcoma. Of the gaint celled tumors 5 of the upper and 2 of the lower jaw fall under the designation clinically of epulis. Of 22 cases only four occur among males. The ages in 13 patients were in the prime of life; four cases occurred in children and five in persons 58 and 63 years old.

The time in which the sarcomata reach a considerable development must vary. In one case a tumor became inoperable (in size) within 5 weeks, while another case required 10 years to reach a considerable size. The average time of existence of the growth at the date of reception of the patient into the clinin has been as follows: Round celled sarcoma, 3 months; periosteal giant celled tumors, 6 months; spindle celled sarcoma 14 months. The symptoms as a rule were less severe than with the carcinomata, more especially in the lower jaw. The sarcomata of the upper jaw caused much distortion of the features, thereby necessitating the operative aid. The general conditions of the patients was good. In two cases only were metastases the cause of constitutional cachexia. The prognosis is in general a more favorable one than with carcinomata. Of the cases operated upon the author shows 70% remained permanently cured and free from a return of disease. In two cases of sarcoma the lymphatic glands were affected, showing to the author's mind the unreliability of such infection as a sign of carcinoma.

Two cases of adenoma are recorded (female æt. 57, male æt. 66) both originating from the mucous membrane of the antrum of Highmore.

The author includes with the tumors of the upper jaw 2 cases of fibromota of the naso-pharyngeal space. Two cases of cysts of the alveolar process of the upper jaw, one of the antrum, and 3 of the lower jaw are also reported. In the sixth section of his paper the author records a case of osteoma of the lower jaw in a girl 12 years of age.—*Zeitsch. f. Chirurg.*, bd. 28, hft. 6.

HENRY KOPLIK (New York).

IV. On the Operative Treatmnet of the Antrum According to Mikulicz. By Ignaz Link (Lemberg). This method was described in the Annals of Surgery, Oct. 1886, p. 335. Though Mikulicz was successful in four cases, Stoerk soon (*Wien. Med. Wchr.*, 1886, No. 43) emphasized the natural difficulties of opening into the antrum from the lower nasal passage as well as the often probable injury of the inferior turbinated bone and even the alveolar roof. Stoerk disapproves artificial opening of the antrum as he has always found access possible through the natural communication beneath the middle turbinated.

However, Link adds two new successful cases. In one a previous alveolar fistula closed up in a week, and in the second a buccal and an alveolar fistula were also cured in about the same time. Thereafter each patient learned to syringe out his antrum through the intra-nasal operative opening. Hence he claims that this method of relief is radical and rapid. He further briefly describes a method of his own for percussing the antrum based on repeated tests in the healthy and diseased. He puts one end of a smooth round bit of wood the length of a finger against the hard palate close above the second molar tooth. Then by percussing the free end of the stick with the finger, he produced full clear resonance when the antrum was empty but dulness when the antrum was full. This is not affected by closure of the corresponding nostril.—*Wien. Med. Wochr.*, 1888 No. 31.

William Browning (Brooklyn).

V. Four Cases of Ligation of the Vertebral Artery for Epilepsy. By Dr. Roman v. Baracz (Lemberg).—The first three cases of ligature of the vertebral artery for epilepsy were reported in the *Medical Times and Gazette* of November 19, 1881, by Dr. W. Alexander, of Liverpool, who operated at the suggestion of Dr. Hughlings Jackson.

According to Alexander, the good effects of the operation are due to a diminution of the venous stasis in the medulla. The characteristic physiological expression of this operation is seen in the contraction of the pupil on the operated side, and this should be lasting.

This phenomenon is explained by a lesion of the branches of the superior cervical ganglion of the sympathetic.

In *Brain* of July, 1882, Alexander published the report of twenty-one cases, in which he had ligated either one or both vertebral arteries for epilepsy. One patient died of blood poisoning, all the others recovered perfectly from the operation. Three patients remained free from epilepsy for one year. Nine could be considered cured, as they had had no attacks for many months. Eight were improved in so much as the force and frequency of the attacks were diminished.

Dr. Alexander concluded his paper by saying that ligation of the vertebral artery is a perfectly justifiable operation when other means of cure have been tried without avail, such as the removal of the external causes and the prolonged use of internal medication.

The best results are obtained in recent cases where other means have failed. Only amelioration can be expected in chronic cases.

Baracz's four cases are as follows:

Case I. Male, æt. 22 years; perfectly well till age of 16, when one evening at meal he fell senseless to the ground, and had another such attack six weeks later. These attacks occurred every six weeks for some time, then every three weeks, and between times he had also five or six attacks of petit mal. Prodromata were pain in the back of the head, nose bled, bloody sputum and a rebellious nasal obstruction. All possible internal remedies were tried, and in February, 1888, the operation of ligation of the vertebral artery was proposed.

The operation was done on March 6, 1888. An incision, 8 cm. long was made, beginning at the clavicle and running parallel with the posterior border of the sterno mastoid muscle. The external jugular vein was cut between two ligatures, the fascia between the sterno mastoid and scalenus anticus muscle divided and the muscles separated by blunt dissection. The sterno mastoid muscle, together with the large vessels of the neck, was pulled forward and the scalenus drawn backward, and the carotid tubercle was felt for, the deep fascia opened, and the vertebral artery sought; the finding of the artery was rendered difficult by the venous hæmorrhage in the bottom of the wound; this was stopped by compression. In the rapid isolation of the vertebral artery from its accompanying vein, owing to the patient's poor condition, the vein was wounded, therefore both vessels were tied en masse, both above and below the wound in the latter. The artery was found much enlarged. The wound was closed and drainage tube introduced.

The operation lasted one and one-half hours.

The evening of the operation the patient complained of pain in the back of the head; pulse 100, temperature 38.4°C.; marked contraction of the right pupil, accompanied by ptosis on the same side. The wound healed per primam, and up to the time of writing, July, 1888' the patient has had no return of his trouble and feels considerably better.

Case II. Male, æt. 24 years; suffered from epilepsy for the last 17 years; the attacks came on at irregular intervals, but at times has had as many as 60 or 70 attacks in 24 hours. Internal treatment and electricity had been tried without result. On March 10, 1888, the right vertebral artery was tied, the same operative procedure being employed as in the first case. During the operation the patient had two epileptic attacks, each of which lasted over one minute. Immediately after the operation contraction of the pupil and ptosis were observed on the operated side, together with a slight facial paralysis.

The wound healed kindly.

The attacks appeared up to the 24th day after the operation, but diminished in force and frequency, and from April 4 to July 20, 1888, the patient has only had one attack.

Case III. Male, æt. 29 years, suffered from epilepsy for eight years. The attacks were slight at first, but in 1887 they became very severe and lasted for several hours. Internal remedies had been taken faithfully without any result. Both vertebral arteries were tied June 14, 1888. The wound healed kindly and the patient had only one slight attack in July.

Case IV. Boy, æt. 14 years. At the age of 10 years the boy had a few epileptiform attacks which passed away and left him perfectly well till August, 1887, when he suffered from a very severe attack; after that he had one every third or fourth day, till in June, 1888, patient had four attacks in one day.

The patient was operated on August 25, and both vertebral arteries were tied; the operation lasted one and one-half hours. Both pupils markedly contracted after the operation. The patient had a convulsion half an hour after the operation, but this only lasted a few minutes, and was ushered in by a cry.

The wounds healed kindly, but the patient is yet in the hospital.

The way in which ligature of the vertebral artery acts in these cases is not yet settled; it was at first thought to be due to a diminution of the circulation in the pons and medulla, but the anatomical relations of the artery are against this, owing to the numerous anastomoses of the artery. It is probable that the good results of the operation are in part due to the fact that the sympathetic nerve is either included in the ligature or wounded during the operation, as evidenced by the contraction of the pupil and ptosis on the operated side, which characteristic lesion has appeared in every case operated on by Alexander and the writer.

The contraction of the pupil is generally permanent, and only disappears in a few cases at the end of a long time.

Statistics of the operation. According to Dr. Baracz there are only 45 published cases including his 4, and the operators were Alexander, Sidney Jones, Bernays (of St. Louis) and himself. The results were as follows: Definitely good results, 8 cases; improvement of the condition of the patient in 11 cases; unknown final result, 7 cases (four of the writer's cases and three of Sidney Jones'); in 19 cases the operation gave no result.

If the improved cases be added to those of cure, it gives a result of nearly 50% in favor of success after the operation, and 19% of cures.

According to Baracz the operation is perfectly justifiable and ought to be attempted when all other means have failed.

Of course the operation is out of question in cases of reflex epilepsy which have their source in some traumatism, and especially in the so-called cortical epilepsy of Jackson.—*Wiener Medizinische Wochenschrift*, No. 7, 8, 9, 1889.

F. C. HUSSON (New York).

VI. An Artificial Tongue. By A. Poncet (Lyons). Following total extirpation of the tongue, Poncet strongly recommends the apparatus of Martin, of Lyons, which, both in cosmetic effect as well as functionally, is said to possess the greatest advantages. It consists of a horseshoe-shaped piece of metal, which is supported by the lower teeth, something like an artificial tooth-plate. At the point of greatest concavity, a pin having an articulating point is placed, and upon this is attached a soft rubber pocket, shaped so that, when partially filled with fluid and attached, it will be about the size and shape of the natural tongue. A patient wearing this apparatus can eat and speak quite satisfactorily, and there is no dribbling of saliva, the latter being swallowed as in health. It is not probable that the apparatus favors a recurrence of the disease. Time is required to enable the patient to become accustomed to this artificial tongue, before the full advantages and benefit of the apparatus can be obtained.—*Provence Méd.*, June 16, 1888.

Geo. R. Fowler (Brooklyn).

VII. A Case of Congenital Macro-glossa, With True General Muscular Hypertrophy and Idiocy. By Franz Bruck (Berlin). On November 5, 1886, a female child, æt. 10 months, was brought to Prof. Wolff's clinic, to be operated on for congenital macro-glossa. The child's parents were perfectly healthy, but the child had twice had some lung trouble. The tongue protruded from the mouth as a thick bluish mass, and interfered with respiration and feeding.

On November 7, Prof. Wolff removed a wedge-shaped piece of the tongue; there was but little bleeding. The immediate result was extremely satisfactory, and in two weeks the child was sent home apparently cured.

Six months later, May, 1887, the child was brought back to the clinic, and, according to the statements of the mother, the mouth of the child had remained open since a few weeks, and though the tongue did not protrude, it was greatly enlarged, both in width and thickness, and caused renewed interference with respiration and deglutition.

It was not deemed advisable to repeat the operation, as there was always great danger of recurrence. Now the condition of idiocy of the child could be perfectly well made out. The facial expression was dull and silly, and the child was perfectly indifferent to all its surroundings. Examination of the child showed that while at rest the muscles of the back and of the extremities stuck out like those of an athlete; still more marked was this on the slightest movement. All the muscles felt hard and firm. The skin of the body resembled that of an old person; it was thin and atrophic. The panniculus adiposus was absent. The circumference of the head, just above the ears, was 45 cm.; that of the neck 31 cm.; the chest, at the level of the 3d rib, 43 cms.; that of the abdomen at the level of the umbilicus, 47. The circumference of the upper third of the forearm was 14 cm, and that of the thigh, a little above its middle, 22 cm. The calves measured 16 cm.

The upper extremities were noticeably short. The contractility of the muscles was not increased. The skin reflexes were normal. The tendon reflex at the knee was slightly increased. The electrical examination showed nothing abnormal. There was slight anesthesia. The faculties of hearing, taste and smell seemed scarcely developed. No teeth in either jaw.

Microscopical examination of the removed portion of the tongue and of a small piece of the Deltoid muscle, which was excised for diagnostic purposes, showed only normal muscular tissue, so that the case has to be considered as one of true muscular hypertrophy.

The child died in August, 1887, from pneumonia.

At the necropsy, the brain and spinal cord appeared normal; the gyri of the brain were small. Microscopical examination of these tissues revealed nothing abnormal. There was an extreme hypertrophy of all the muscles of the skeleton, except of the glutei. The muscular coat of the œsophagus and intestines was much thickened. The heart was very small, and there was no hypertrophy of any of its muscular tissue. The liver was normal. The bones were not thickened.

The case was extremely interesting from many standpoints:

1. On account of the scarcity of microscopical data in cases of macro-glossa.

2. That the case belongs to the group, of the few reported cases of true hypertrophy of the muscles of the skeleton, and that it has a unique place among these cases, as it was a general hypertrophy of all the muscles, and not, as is the rule, of one group of muscles.

3. Macro-glossa and general muscular hypertrophy have not yet been described as occurring together in the same subject.

4. On account of the accompanying idiocy, and of the possibility that this trinity of symptoms (idiocy, muscular hypertrophy aud macro-glossa), are not accidental, but belong to one form of disease.—*Deutsche Med. Wochen.*, No. 12, 1889.

F. C. HUSSON (New York).

VIII. Operation for Torticollis. By M. LEVRAT (Paris). The author has devised a new method of treating torticollis. Instead of operating subcutaneously, he cuts down upon the sternal tendon of the sterno-mastoid muscle, by means of a longitudinal incision two cm. long. He clears the tendon with the forceps, passes a grooved director under it, and divides it. He then divides any tissue that may bind down the muscle at that spot, sutures the wound, and dresses it antiseptically with iodoform and gauze. Over the dressings he places the following apparatus: The head being enveloped in cotton-wool, a silicated bandage is wound horizontally around it at the level of the forehead, and a similar bandage vertically over the crown and under the jaw. Where these bandages meet at the level of the mastoid process on the sound side, a small hook, with the concavity looking upward, is inserted. Another silicated bandage is wound around the body below the axillæ, and through the thickness of the bandage a hook is inserted in the middle line in front, having its concavity looking downward. When the bandages have dried, the two hooks are connected by a band of india-rubber, which assists the sterno-mastoid of the sound side to keep up a continuous traction, and so correct the deformity. This apparatus and the dressings are left untouched for fifteen days, and the success of the operation is said to be assured.—*Lancet*, Nov. 24. 1888.

IX. The Artificial Emptying of the Tumor in Enucleation of Diseased Portions of the Thyroid Body. By Prof. BOSE (Gresen). Since Socin directed attention to the fact that in the majority of cases of goitre the disease is limited to nodular foci, which latter may be removed from the surrounding healthy parenchyma, this "intraglandular shelling-out" process is, without doubt, the most rational procedure.

By the development of these nodules the healthy tissue is not destroyed, as in cases of malignant disease, but only crowded apart and pushed over the larger masses, and converted into a thin layer; atrophy occurring to a certain extent, a large portion of the healthy tissue remaining. Therefore the intraglandular shelling-out of these diseased nodules can be accomplished with the same certainty of curing the disease, without the danger attending total extirpation, such as the risk of the supervention of peculiar cachexia following the removal of the thyroid body, injury to neighboring large vessels and nerves, secondary hæmorrhage and the opening of connective tissue spaces in the deep portions of the neck. In the operation by enucleation, the wound closes easily and unsightly and extensive lines of cicatrical tissue marking union of incisions are avoided.

Owing to the difficulties sometimes experienced in readily determining the boundaries of the nodular masses, and consequently of separating the capsular investment of the same, and the additional fact that they sometimes crowd upon each other in such a manner that the partition walls of the tissue become virtually obliterated by pressure (since these latter are really formed of the healthy glandular tissue itself, and hence atrophy will easily take place), it is important to avoid hæmorrhage to as great an extent as possible during what may prove to be a prolonged operation; and to be even prepared to perform entire extirpation of the thyroid itself, should the enucleation be found, owing to the before mentioned difficulties, impracticable. Prof. Bose performed the operation for the enucleation of goitre three times, with unexpectedly good results by the following method: An incision is made over the most prominent portion of the tumor, beginning below near the inner extremity of the clavicle, and carried upward and outward toward the angle of the lower jaw. This incision serves for the enucleation of the goitre affecting one lobe only; if the disease affects both lobes, a similar procedure is to be executed upon the opposite side at a subsequent sitting. After separating the skin, the superficial fascia, platysma myoides and the muscles attached passing from the sternum to the larynx and hyoid bone, and covering immediately the thyroid body, are brought into view. If the muscles are now loosened from the gland capsule, and the loose connective tissue surrounding the gland separated somewhat by means of the tips of the fingers, this portion of the gland may be lifted from the depths of the wound and its greatest diameter made to appear above the level of the skin. By holding the tumor a short time in this position, its contained blood is very considerably decreased in quantity, as for instance, in a limb placed in the vertical position. An elastic ligature is then placed around the tumor at the level of the edges of the skin; elastic tubing of the size of the little finger answers the purpose well, and this is passed, while stretched, three or four times around the gland, and is secured by crossing its ends and fastening them by means of a catch forceps.

An incision may now be made into the gland, and the nodular masses representing the disease deliberately enucleated, without noteworthy loss of blood, by means of the finger or a blunt instrument. This may be accomplished, even if it be found that those portions of normal structure which seem as partition walls between the nodular masses have been entirely obliterated and the latter are attached to each other and require the aid of the scissors in their separation. As the nodules are enucleated the pressure of the elastic tourniquet crowds forward the diseased portions more and more, until finally the healthy tissue of the gland remaining becomes converted into a pedicle.

One would naturally suppose that, upon a removal of the elastic ligature at the termination of enucleation of the diseased portions of the gland, a considerable hæmorrhage must necessarily follow. This, however, does not, as a rule, occur, and in fact, even the parenchymatous oozing is slight, and in no case is tamponade of the wound re quired. The depths of the wound are to be disinfected, and the usua drainage and suturing of the edges follow.

This procedure can be employed in enucleating cysts of the thyroid or cystic goitre, as well as for the removal of solid nodules. It is evident, on the contrary however, that it is not applicable in those rarely occurring cases in which a non-malignant tumor of the thyroid is situated behind the sternum or trachea, and which is found to remain immovable after separation of the skin and muscles.—*Centbl. f. Chirg.* 1889, No. 1.

GEORGE R. FOWLER (Brooklyn).

X. On the Treatment of Goitre by Ligation of the Afferent Arteries. By Prof. RYDYGIER (Cracow). This is the method resurrected and improved by Wölfler, as given in ANNALS OF SURGERY, Dec., 1886, p. 523-5. Since then Obalinski has reported two such operations, and Billroth 4; though only twice were all four arteries tied. To these Rydygier adds 12 new cases, in 11 of which all four arteries were ligated and in one only the two on one side. He ties the inferior artery at the very certain and relatively easy point proposed by Drobnik (1887), only a little further down than Drobnik, at the upper border of the clavicle on the outer border of the sterno cleido muscle. This slight modification is to make the vessel more accessible, and the scar at a less visible point. He severs each artery after double ligation. Primary union under one dressing—without drainage except in one, slight aseptic fever in few. The curative effect was admirable in all but two. One exception was the first case, where only the two arteries on the right were tied. Here the subjective improvement proceeded very slowly and the objective never amounted to that where all four were tied. In another case there proved to be a cyst in one lobe and that side did not reduce.

This gives a total to date of five unilateral operations, with results varying from a definite cure to no effect at all. Hence while this method may give satisfaction, it should at least not be trusted where the other side is in the least involved. That gangrene does not follow tying all four arteries is now shown by fourteen cases. It appears that in all these latter cases that have been observed some time, the permanency of the result is established.

No effect is to be expected in cases where further shrinkage is impossible as in fibrous goitre, and it is doubtful in cystic and advanced gelatinous goitre. The most favorable cases are those of fairly recent parenchymatous goitre and very vascular forms. So far as those operated in this way have been followed no effects suggestive of cachexia strumipriva have been noted.

Billroth in his eight ligations of the inferior artery, tore the vessel three times; and concluded that it was overthin and fragile. Rydygier had the same experience in one of his twenty-three, and that, as in Billroth's cases, without much strain on the vessel. He appends a short sketch of each case.—*Wien. Med. Wochr.*, 1888, Nos. 49 and 50.

XI. On Scirrhus of the Thyroid Gland. By TH. BILLROTH (Vienna). He first mentions having repeatedly seen cases, mostly in women, of hard indurations in the neck in the region of either half of the thyroid. It did not seem so much an enlargement or tumor as a deep cicatrization. Recently two such cases presented themselves with symptoms sufficient to warrant an operation. These consisted in pain radiating from the neck, and difficulty in deglutition and respiration. The extirpated material proved the trouble to be an almost cartilage-hard scirrhus of the thyroid,—only paralleled by what he terms scirrhus cicatrans mammæ. In one case lymphatic glands became infected. One patient was 46 years old, the other 26. Extirpation he believes gives some and the only chance of cure, though one of his cases died directly form the operation and the other was dying of a relapse.—*Wien. Med. Woch.*, 1888, No. 20.

WILLIAM BROWNING (Brooklyn).

XII. Œsophagotomy for Removal of Foreign Body. By J. S. M'ARDLE, F.R.C.S. The foreign body was impacted on the left side just above the sternum. It had been in this situation for about a month, and had caused a considerable amount of irritation and inflammation. A swelling, about the size of "a small egg," lay behind the sternal attachment of the left sterno-mastoid. Pressure on the swelling caused sharp pain. Mr. M'Ardle considered that the foreign body, a piece of beef bone, had penetrated the wall of the œsophagus on the left side, and was probably pressing on the vessels. There were no symptoms of nerve pressure or irritation. Mr. M'Ardle determined to cut down on the foreign body and remove it, so as to prevent perforation. An incision made along the anterior border of the sterno-mastoid at the lower part revealed adhesion of the œsophagus to the vessels. Lest any injury should happen to the carotid, two provisional ligatures were passed round the vessel above and below the adherent area. To enable him to do this, Mr. M'Ardle cut through and reflected the sternal attachments of the sterno-mastoid, sterno-hyoid and sterno-thyroid. The thickened œsophagus was then incised, and two pieces of bone discovered and removed. They were both imbedded In the wall of the œsophagus (size not mentioned). The wound was washed with carbolic lotion, and plugged with iodoform gauze. The patient made a good recovery. In remarking on the after-treatment of the case, Mr. M'Ardle said that he put great faith in the antiseptic plugging of such a wound, to prevent septic infiltration of the cellular tissue of the neck. The provisional ligatures on the carotid were not required.—*Dublin Journal of Medical Science.*

CHEST AND ABDOMEN.

I. **The Mortality of Abdominal Section.** By W. A. Meredith (London). At the meeting of the Royal Medical and Chirurgical Society, the author read a paper, the purpose of which was to draw attention to certain points affecting the present death-rate after abdominal section, and with this view operations for ovarian growths were chosen as being to some extent representative of the entire subject under consideration. As a basis for the inquiry, the results of the author's own work in this connection, amounting to 126 operations, were examined with regard to the chief causes influencing the mortality, special reference being made to the ten deaths which occurred in the series of 104 completed ovariotomies. All the operations were performed with strict antiseptic precautions, including the use of carbolized spray. He was now less inclined than formerly to look upon the latter as an absolute essential to the safeguards of antiseptic abdominal surgery, but he still considered it valuable as the most convenient and effectual means of antiseptic irrigation at our disposal when dealing with the peritoneal cavity. Both ovaries were removed in 17 cases, 2 of which terminated fatally, but in neither instance was the result in any way attributable to the removal of the second ovary. Complete enucleation was performed in five cases, all successful, the resulting rent in the broad ligament being closed by a continuous silk suture. He advocated the use of the drainage-tube in all cases of ruptured or inflamed cysts, in any case where irritating or septic fluid had escaped into the peritoneum, in all operations complicated by serious injury to bowel or urinary bladder, in every instance where washing out had been resorted to, and in all cases of severe operation in middle-aged or elderly women. For washing out the peritoneum, where necessary, he advocated the use of plain, recently-boiled water, cooled as required by the addition of a saturated solution of boric acid. Discussing the mortality, he was inclined to believe that in large series of cases the average death rate would never be less than 5 or 6%. Of the 10 deaths in his series, 2 were from septicæmia, 1 from intestinal obstruction, 1 from hæmorrhage, 1 from dysenteric diarrhœa, 2 from chest complications, and 3 from exhaustion; 3 of these deaths were from preventable causes. Twelve successful operations for the removal of diseased uterine appendages were next reviewed. In 7 patients, in whom both appendages were removed, complete arrest of menstruation followed. He had found that in cases of chronic ovarian mischief about 90% were the subjects of obstinate constipation, and in them tonic purgative treatment, by lessening pelvic congestion and preventing the formation of scybala, was followed by marked relief of symptoms. Included in a series of 10 exploratory operations were 2 incomplete ovariotomies. Both patients had been tapped, and the death of 1 was directly due to the difficulties encountered in the attempt to separate universal adhesions which had resulted from this treatment. In conclusion, it was shown that the increased success of abdominal section for ovarian disease during the past 20 years was chiefly attributable to the diminution in the number of deaths from septicæmia. For purposes of comparison he took 3 successive groups of operations, which represented 3 separate periods during the last 12 years, and gave their average death-rate from septicæmia alone. In 100 consecutive cases taken from Sir Spencer Well's work, when the clamp was used, and before the employment of antiseptics, the mortality was 10; or 1 to every 10 patients. In 150 cases recorded by Mr. Thornton in the sixty-fourth volume of the *Medical and Chirurgical Transactions*, which were treated antiseptically and with intra-peritoneal ligature of the pedicle, there were 5 deaths, or 1 to every 30 patients. In his own series of 104 cases there were 2 deaths, or 1 to every 52 patients. The chief factors which had contributed to this increased success, he thought, were as follows :

1. The general adoption of the intra-peritoneal treatment of the ovarian pedicle 2. The application of the antiseptic system to abdominal surgery. 3. The gradual abandonment of the practice of tapping abdominal cysts. 4. The increase of our knowledge respecting the proper use and management of the drainage tube. 5. The recent introduction of the plan of freely washing out the peritoneal cavity in cases complicated by the extravasation of blood or other fluid. —*Lancet*, Oct. 27, 1888.

II. Intrathoracic Hydatid Cyst: Exploratory Laparotomy. By J. Ribera y Sans (Madrid). A girl, æt. 10 years, was admitted to the Hospital for Children on April 30, 1888. Hydatid cyst of the liver being diagnosed by Dr. Gonzalez, she was transferred to the surgical side for operation. Her general health was good, digestion perfect, lung-sounds normal, perfect symmetry of both sides of the thorax. Enormous swelling of the abdomen, especially above the umbilicus; skin much stretched, with conspicuous net-work of superficial veins. Fluctuation in lower part of abdomen. A solid tumor, everywhere dull on percussion, occupied the upper part of the abdomen, descending on the right side almost to the iliac fossa, on the left extending to the left hypochondrium. No hydatid tremor to be made out. On May. 17, an exploratory abdominal section was performed; the supposed neoplasm came into direct contact with the opening, and closing it so that the intestines did not protrude. The color of the tumor was a slaty grey, and it resembled in appearance an enormously hypertrophied pancreas. On introducing the hand into the cavity of the abdomen the tumor was found to reach the right iliac fossa, extending to and occupying the whole of the right hypochondriac regions. Without adhesions in front and below, above and behind it was firmly attached to the abdominal walls, so that it was only possible to explore the anterior surface and lower border. No diagnosis was come to; the solid tumor, evidently in intimate relation with the liver, neither in color nor appearance resembled that organ, and it was impossible to say whether it was the enormously hypertrophied liver or neoplasm in intimate relation with it, or a cancer of the epiploon, or a neoplasm of the pancreas. Its removal being out of the question, the wound was closed, the abdomen being much diminished in size by the escape of the ascitic fluid. The patient recovered well from the operation, and was just about to be discharged when she contracted diphtheria; recovering from this, she caught small-pox and died. [Apparently there are no means for the isolation of infectious cases.] On *post mortem* the abdominal tumor was found to be the enormously hypertrophied liver firmly adherent above and behind. On the right side the diaphragm was depressed, forming a large projection into the abdominal cavity. On its thoracic side was adherent to it an enormous hydatid cyst, tense and full, measuring 24 centiméters long by 15 centiméters wide. This cyst, depressing the inferior wall of the thorax, pushed down the enlarged liver. The most notable point is that it so little modified the relations of the lung that during life no alteration could be detected. Its presence was shown by no physical signs, and the patient never had shortness of breath nor the least increased frequency of respiration.—*Rev. de Med. y Cirurg. Practicas*, Feb. 7, 1889. *London Med. Rec.*, April, 1889.

III. The Surgery of the Gall-Bladder. By DR. CREDE (Dresden). At the meeting of the Eighteenth Surgical Congress, held in Berlin, June 1, the author spoke upon this subject. His observations were based on 5 cases. All had suffered from gall-stone colic for more than 8 years, and all were reduced in flesh. In 1 case no tumor could be felt, but in others the swelling was evident. The tumor was of great diagnostic value. If the gall bladder felt soft, it must be more or less normal; it could fill up, as it was not attached to the neighboring parts, and a normal condition might be restored by cystotomy. In other cases, in which distention could not take place, there was degeneration, and there was no chance of restoring the functions of the viscus. In such cases extirpation was demanded. In one case in which he could see only the point of the gall-bladder like the tip of a finger, he raised the liver, separated the gall-bladder with great difficulty, opened it, and removed to large stones. On examining with the finger, he felt the end quite rounded; he could not penetrate into the ductus communis. As he was about to remove the gall-bladder he felt another rather large stone deep down, which was plainly the cause of the severe symptoms. He removed the stone and then excised the gall bladder. Four arteries spouted, which were compressed with forceps and removed after 24 hours. On account of the firm attachment of the liver to the gall-bladder it was thoroughly cauterized. No reaction; no fever. Later, some calculi came, and always in connection with an attack of colic. In the second case 4 large stones were removed, and the gall-bladder was then drained. When the gall-bladder was removed from dogs, they immediately got enormous appetites; but notwithstanding a plentiful supply of food, they emaciated considerably. In the two cases mentioned quite a fabulous appetite declared itself shortly after the operations, and the first patient soon lost 12 pounds in weight, and the second five. They did not show any increased weight until the sixth week. He thought that notwithstanding the results hitherto had been unfavorable, they would be much better when the method of operating had become perfected.

Dr. Thiem (Kottbus) had a patient sent to him with an abdominal tumor. In injecting the rectum with water, the ascending colon could be plainly felt, and he concluded the tumor was a malignant one of the omentum.

Operation.—As it was impossible to separate the tumor from the abdominal wall, this was cut straight through with the scissors. He then followed a band upward and reached a second tumor—the gall-bladder. This was intimately adherent to the intestine and omentum. Severe parenchymatous bleeding. After its arrest and ligature of the cystic duct the tumor, which was hour-glass shaped, was removed. Not only the gall bladder, but its connecting passage and the tumor of the abdominal wall, were distended with gall-stones. A gall-stone fistula soon formed, and healing never took place.

Dr. Korte (Berlin) demonstrated some gall stones, 1 of which he removed from the interior of a small intestine, which had become blocked up by it. The patient died 12 hours after the operation.

Dr. Rehn (Frankfort) had also removed a biliary calculus that gave rise to symptoms of ileus. The patient recovered.

Dr. Hagemann had performed 3 operations of the kind under discussion. 2 cholecystotomies, and 1 cholectomy. All the cases recovered. The subsequent history of the cases was as follows:

The first patient lived a year, then became cachectic, and died. The second became ill 3 months after operation, with pains and shiverings. Examination revealed echinococcus cysts in the stools, evidently from the liver. An exploratory incision was made November, 1888. Three days later she became somnolent, and died of septicæmia. Section showed a rather large collection of echinococci that had burst in the direction of the surface. The third patient was living, and 3 weeks before had a slight attack of colic.

Dr. Helferich (Greifswald) had had a fatal case in which a gall-stone gave rise to symptoms of ileus. The half of a gall-stone was found at the point of entry of the gall bladder into the duodenum. It had here destroyed the muscular tissue, and in consequence of this had set up circumscribed peritonitis, dragging in its train the ileus, and paralysis of intestine.

Dr. Tischendorf (Leipsic) had extirpated the gall-bladder 2 years ago. The patient was still quite well, and was then half way through a normal pregnancy.

Dr. Langenbuch (Berlin) had had a total of 24 extirpations of the gall-bladder. The more experience he had the more he felt the need of collecting further information and of hearing the observations of his colleagues. It was very difficult to formulate any guiding principles for the choice of the method of operation. Cholecystotomy was an operation that well deserved recognition, although its results were not so favorable as had been represented. Out of 75 cases of operation there had been 2 relapses, 11 deaths and 16 cases of fistula; in 61.3% uninterrupted recovery. He had only lost 2 out of 22 cases. through too late operation. In cases in which he felt the ductus choledochus filled with calculi he would not operate at all, or with the greatest caution.—*Medical Press and Circular*, June 5, 1889.

GENITO-URINARY ORGANS.

I. Unusual Case of Urethral (Scrotal) Calculi. By Dr. Nikolai I. Teziakoff (Ariaj, Russia). A robust Bashkir peasant, æt. 18, applied to the author for scrotal stone of fifteen years' standing, painful micturition and scrotal fistula dischargng urine with occasional calculi of the size of a walnut. The fistula had appeared about twelve months previously. On examination, the scrotum was found to be considerably enlarged, tense and smooth and to contain a crepitating hard mass as large as a male fist. About the middle of the right half, 1 cm. from the raphe, there was present a fistulous opening with smooth cicatricial edges. A catheter, introduced into the urethra, struck a "stony obstacle" 2 cm. from the meatus and could not be pushed further. A probe, passed through the fistula, came in contact with the catheter in the urethra. Scrototomy with urethrotomy was at once proposed and willingly accepted. Accordingly, an incision, 4 cm. long, was carried along the raphe, and the cavity opened. As many as 20 stones of various shapes and sizes (from that of a cedar nut to that of a hen's egg) were extracted. The cavity proved to be nothing else than an enormous diverticulum of the cavernous portion of the urethra, beginning from the pars membranana, occupying the whole scrotum and gradually passing into the normal urethra, 2 cm. from the external orifice. The cavity was lined with an apparently normal urethral mucous membrane. Having washed it out with a corrosive sublimate solution (1 to 2000), the author introduced a Nelaton's catheter into the bladder through the urethra and a drainage tube into the scrotal cavity, and closed the wound with sutures. The after-treatment consisted in washing out the cavity with a 2 per cent boracic lotion. On the fifth day, the drainage, and on the sixth the catheter were removed, the incision healing *per primam.* On the fourteenth day the fistula was pared and closed. On the twenty-eighth day the patient left well, the diverticulum having contracted down to a small-sized sac about the root of the penis. Dr. Teziakoff hopes that with time the patient's urethra will assume its normal condition. The calculous mass removed weighed *4 ounces 7 drachms*, the largest concretion (measuring 6x4½ cm.) ℥ij. ʒj. ℈ij. The calculi had a greyish white color and a partly rough, partly polished surface. They consisted of phosphates.—*Meditzinskoie Obozrenie,* Nos. 2 and 3, 1889.

VALERIUS IDELSON (Berne).

II. On the Relation of Congenital Phimosis to the Origin of Hernia. By J. ENGLISCH (Vienna). After discussing the various previous statistics and views—Friedberg, Osborn, Kempe and Schmid, positive; Wittelshoefer, negative—he tabulates 138 cases of phimosis, collected from 1800 observations at all ages up to 70 years. He argues that if congenital phimosis be a cause of hernia, it would be all the more apparent the longer its duration and hence adds these statistics from adult life. They do not show any predominant influence of this cause. He concludes that the frequent coexistence of visceral herniæ and narrowness of the prepuce can not have its cause in the latter, but in the coexisting imperfect closure of the peritoneal diverticle. Phimosis and narrowness of the urethral orifice have only a subordinate importance.—*Wien. Med. Wochr.*, Nos. 26, 27 and 28, 1888.

WILLIAM BROWNING (Brooklyn).

III. The Operative Treatment of Hypertrophy of the Prostate. By H. KUEMMEL (Hamburg). At a meeting of the Hamburg Medical Society, Kuemmel reported three successfully operated cases of hypertrophy of the prostate, occurring in subjects 65, 70 and 72 years of age. The operation was performed in the following manner: The bladder was previously disinfected, and then filled with 300 grams of water. An ordinary epicystotomy was made, the enlarged prostate siezed with forceps, drawn forward and as much as necessary of the hypertrophied mass removed with the Pacquelin cautery, or the galvano caustic loop. If stricture of the prostatic urethra was present it was stretched with a suitable dilator and a large-sized catheter afterward introduced and left in situ. The vesical wound was closed special attention being paid to the suturing. The prevesical space was packed with iodoform gauze and the external wound allowed to granulate. The dressing was removed on the tenth day.

A large Nelaton catheter is always introduced into the bladder after the operation, and allowed to remain for fourteen days, when it is removed, for by this time a firm union of the vesical wound may be expected.

When the catheter is removed, the after-treatment commences; it aims to restore the muscular tonus to the organ, and to obtain this, injections of strychnine, washing out with cold water, and intra-vesical applications of electricity are used.

He regards permanent catheterization, perineal section, and the establishing of a supra-pubic vesical fistula as only palliative measures, in the treatment of enlarged prostate, since they can not prevent the recurrence of urinary retention and vesical catarrh.

He thinks the operation of removing the enlarged middle lobe per urethram as has already been done several times, to be extremely limited in its scope, being only suitable for some of the rarer forms of the disease, where the pedunculated middle lobe of the prostate acts as an obstruction to the flow of urine.—*Deutsche Med. Wochenschrift*, No. 16, 1889.

F. C. HUSSON (New York).

IV. Emptying the Bladder by Manual Compression.

By JULIUS HEDDAEUS (Idar). The author has found manual compression of the bladder an admirable substitute for catheterism in a considerable number of cases where mechanical aid of some kind is imperatively called for. He employs two methods, which may be used alternately, so as to give relief to the hands when they get tired. In the first method the surgeon stands by the side of the patient, who lies on his back. Looking toward the patient's face, he lays the right hand on the left, puts the thumbs together, and then grasps the bladder so that the thumbs lie close to the symphysis, pressure being made of course downward and backward, and the thumbs being gradually approximated to the little fingers. In the second method, the back is turned to the patient's face and the bladder grasped with the hands placed with their ulnar borders against Poupart's ligaments, the finger tips meeting over the pubes. In the first method the chief work falls on the thumbs, in the second on the fingers. The latter is especially applicable in cases where the bladder is only partly full. Manual compression must only be employed very lightly in cases where the bladder is overdistended, and where there is any inflammation or pain it is altogether contra-indicated. It is mainly useful where there is paralysis of the muscular coat of the bladder, whether with or without further paralytic affections. When the sphincter is paralyzed, so that incontinence exists, this method may be employed for emptying the bladder after it has partially filled, so as to prevent the constant dribbling. One advantage of the manual method is that it may be safely taught to the patient's attendants in many cases, and thus the bladder may be emptied at stated times, and as frequently as the surgeon thinks requisite.—*Lancet.*

V. Washing out the Bladder without a Catheter by means of Simple Atmospheric-Pressure in Cases of Painful Cystitis. By M. LAVAUX (Paris). In a small work recently published (Steinheil, Paris, 1888), Dr. Lavaux gives a description of the method adopted by him. The fluid used is allowed to pass into the urethra by its own weight upon the principle of the syphon, an India-rubber tube carrying it from a reservoir above to the orifice of the urethra, into which a perforated nozzle is passed. The reservoir is placed about three or four feet above the patient, who is lying down. The liquid first fills the urethra, and then passes easily into the bladder. As soon as the patient shows a desire to pass water, the nozzle is removed, and the stream is allowed to passed out naturally. The injection is repeated as often as the operator judges necessary, but usually four or five injections are required, though this depends upon the tolerance of the bladder. Solutions of cocaine and boric acid were chiefly used. For washing out the urethra an elastic fine catheter, with the ends bulbous and the openings allowing of a reversed current, was used, so as to obtain a constant irrigation by antiseptic solutions several times in the day. A number of cases of painful cystitis are detailed, and the conclusions arrived at that this simple method of washing out the bladder without the aid of a catheter has many advantages, and that in cases of painful cystitis the anæsthetic action of cocaine is a great assistance toward cure. Where there is much loss of substance in the urethra difficulties arise, but this mode of injection often helps the surgeon to discover the presence and the position of fistulæ. Greater success in thoroughly cleansing and rendering aseptic the bladder and urethra can be obtained by this method than by any other process. Anæsthesia of the mucous membrane of the bladder can be produced in a few minutes by the injection of hydrochlorate of cocaine by this means, and then the use of aseptic injections will cure cases of cystitis rapidly, and neither morphia nor nitrate of silver nor any cutting operation is required.—*London Med. Rec.*, April, 1889.

VI. Experimental Researches on Restitution of the Bladder. By Prof. TIZZONI and ALPHONSO FOGGI (Bologna). Gluck and Zella, in a communication in 1881, to Berlin Congress of Surgeons, related attempts at complete removal of the bladder in animals, and to lead the ureters, or transplant the same into the rectum. The animals died before the fourth day.

Bardenheuer succeeded in an attempt to transplant one ureter into the rectum. The animal under these circumstances lived, but upon post-mortem he found a condition of hydronephrosis, resulting from a cicatrical contraction of the point of artificial insertion of the transplanted ureter, and dilatation of the latter.

Novaro, of the clinic of Siena, through well directed experiments, succeeded in transplanting both ureters into the rectum, with removal of the bladder; the operation being performed at two sittings.

Prof. Tizzoni and Alphonso Foggi propose to replace the removed bladder by a portion of a loop of the jejunum with its attached mesentery. The operation is without doubt a very delicate one, but the bladder thus procured answers to all demands of the urinary visicus. The portion of bowel to be used is first isolated and resected, the gap being closed by a circular suture of the stumps. Second, the ureters must be loosened from the sides of the bladder and the latter organ removed. Third, one end of the loosened loop of bowel is accurately attached to the neck of the bladder, and the outer opening closed; and lastly, the ureters are to be attached to the artificial bladder thus procured.

A female dog was chosen for the experiment, on account of the great ease of washing out the bladder. Two months after the operation the animal was still alive and in good health.

The operation is more accurately described as follows: A short loop of the jejunum, 7 cm. long, which reached to the os pubis, was isolated, after opening the abdomen in the median line almost to the navel. All fæcal matter was removed from the isolated loop of the jejunum and it was washed in a carbolic solution, and then the opening was closed with a loop or noose, and temporarily attached to the neck of the bladder. This ended the first sitting, the wound in the abdomen then being closed.

About a month afterward the abdominal wound was reopened, the portion of bowel identified and found lying in the longitudinal axis of the abdomen, the lower end lying behind the os-pubis and in front of of the bladder. After loosening somewhat the newly formed adhesions, it changed its situation. This portion of the bowel was well nourished through the mesentery, but contracted so that it was narrowed and shortened. With due precaution the ureters were loosened from the bladder, and isolated to the length of some centimeters. Then the entire bladder was removed.

After these preparations a cross-incision of the lower end of the isolated portion of bowel was made, and the open portion attached to the neck of the bladder. The ureters were sutured into openings in the sides of the new bladder, and the abdomen closed. A thin elastic catheter was fastened in the ureter and bladder, in order to secure a continuous flow of urine from the parts during the first few days.

The second operation lasted about an hour and was well borne by the dog; in the night, however, the animal succeeded in freeing herself from the catheter, but this did not result disadvantageously, for the urine continued to flow from the artificial bladder drop by drop.

Nothing worthy of special note occurred regarding the general condition of the animal. After a few days she again became active, and the wound healed kindly. The facts observed regarding the new bladder, however, are remarkable.

During the first week complete urinary incontinence occurred. The dog, from time to time, endeavored to urinate, assuming the normal position for that purpose, and succeeded in expelling each time about a teaspoonful of urine. In the intervals the balance of the urine flowed away in drops.

By degrees there appeared signs that the sphincter vesicæ had become effective in controlling the urine; after fifteen days the incontinence terminated, urination taking its place and occurring every fifteen minutes. The quantity at each act was calculated to be about six ccm. During the intervals no flow occurred.

With the lapse of time the vesical irritability lessened, and observation showed that the urine could be retained about an hour, and the average quantity evacuated each time from ten to fourteen ccm.

The curious fact is remarked that the incontinence, while it improved for the hours of the day, continued unimproved for the hours of the night, for at least a month; in other words, the animal suffered from nocturnal incontinence. How much this depended on the one hand, upon the nerve centres, or, on the other, upon the slight capacity of the new bladder, before it became distended, is a question for future study.

This first experiment resulted very satisfactorily. The animal after two months was healthy, active, well nourished and even growing fat.

The urine continued to be retained in the new bladder and its contents evacuated in a stream, with the animal in the normal position; frequent urination, however, is still a feature of the case, which probably arises from the slight capacity of the new bladder. It is possible, however, that the latter, with the lapse of time, will become distended to an extent sufficient for the purposes of the normal function. This suggests the advisability in future experiments of separating and utilizing a larger portion of bowel, in order to obtain a greater capacity for the artificial bladder.

This successful result encourages the hope that the operation may be accomplished in a single sitting.—*Centralblatt f. Chirurg.*, 1888, No. 50.

GEORGE R. FOWLER (Brooklyn).

WOUNDS, INJURIES, ACCIDENTS.

I. Anatomical Conditions Found in Cases of Sudden Death after Extensive Burns. By E. FRAENKEL (Hamburg). It is well known that extensive burns on the surface of the body, especially in children and old peple, are often followed by death, either in a few hours or two or three days after the accident.

A number of theories have been advanced.

Sonnenburg believes that death after extensive superficial burns, is due, either to the overheating of the blood and the consequent heart paralysis, or that the characteristic symptoms of collapse presented are due to an over-irritation of the nervous system, which causes a reflex lowering of the tonus of the blood vessels.

Ponfick says the cause of death is due to the disintegration of the blood corpuscles by heat, and the carrying in the circulation of these disintegrated blood cells, and the setting free of hæmoglobine in the internal organs cause a blocking up of the kidneys, and the development of parenchymatous changes.

Lesser declares the acute oligocythæmia to be the functional cause of death. The disintegration, by heat, of the red blood discs, and their functional incapacity, though still maintaining their form, is, according to him, the chief cause of death.

In a case where death occurred 18 hours after an extensive burn o the I and II degree, Fraenkel found, on microscopical examination of the kidneys, a finely granular, highly refracting substance in the convoluted tubes and in the Henle's tubes. This substance at times covered the epithelium of the tubes, and at times lay free in their lumen. The glomeruli were swollen, filling the capsule completely, the epithelium of the tuberti contorti was cloudy—many of the cells were either matted together, loosened from the walls, or so swollen that the lumen of the canals was almost blocked. The nuclei of the epithelium were for the most part not visible, and the photoplasm was changed in a finely granular detritus like mass. The tubuli recti were stopped up with hæmoglobin cylinders. This examination of a fresh specimen was confirmed by examination of hardened and stained sections. A second case, that of a 47 year old woman, who died 15 hours after an extensive burn of the I and II degree, extending over two-thirds of the body, gave the same results for the kidneys. In the spleen a large number of the pulp cells were filled completely with drops of hæmoglobin, some of these cells had ruptured and emptied their contents in the neighborhood. In the liver cells there was a disappearance of the nuclei and degenerative changes in the protoplasm, also an aglomeration of gold-yellow masses, which covered more or less the cells still retaining their nuclei. A third case, death after 24 hours, where the kidneys only were examined, they presented the lesions already described.

According to Fraenkel it is to be seen by the preceding sketch that death results, after extensive burns, from severe organic disturbances, which show themselves in the blocking up of the urinary tubules by hæmoglobin cylinders, the extensive degenerative processes taking place in the epithelium of the kidney, and by the occurence of a finely granular material, whose province is yet unknown. These changes are not limited to the kidney alone, but occur in the liver and spleen, as demonstrated by the second case.

In a case where Fraenkel made an autopsy, 14 days after an extensive burn, the hæmoglobin was still to be recognized in the spleen and kidneys, by the presence of deposits of pigment.—*Deutsche Med. Wochenschrift*, No. 2, 1889.

F. C. HUSSON (New York).

ULCERS, ABSCESSES, TUMORS.

I. **A New Method of Treating Torpid Ulcers.** By Dr. F. Spaeth (Frankfurt). This is a method devised and for some seven years successfully practiced by Dr. A. Harbardt, of Frankfurt. It aims to cure the cause. The chief reason why these ulcers have so little tendency to heal, and so great to break out again lies in the faulty nutrition of the tissues—the insufficient blood supply. Their callous borders consist of dense non-vascular connective tissue, whilst their base is formed by tentinous connective fibers, resisting regeneration. This thickening arises either secondarily from the chronic irritation of the ulcer, or the base of the sore reaches down to some firm non-vascular facia. Stimulating applications, circumcision, lateral decision, Reverdin's transplantations, etc., all fail to remedy the cause.

The new method consists in slitting the ulcer lengthwise and far into the healthy tissue, then adding lateral incisions through the callous borders, also into the normal tissue—the latter cuts being about 2 ccm. apart. All these incisions must go well through the subcutaneous facia, so that the severed parts gape widely. The rather free hemorrhage is controlled by pressure (tampon). Over the wound an iodoform bandage is applied and allowed to remain 8 to 14 days. Abundant healthy granulations shoot up from the incisions and soon cover the whole space; on reaching the skin level, the epithelium forms rapidly. In large defects transplantations can then be made to the nicely granulating surface.

Before practicing multiple incision, the ulcer should have cleansed itself of all necrotic parts.

The resulting cicatrix is far more resistant against insults than those gained by former procedures, a great advantage in the vicinity of joints as it also limits their motility least.

This method usually shortens the period of cure; it is admirable in the obstinate, painful so-called erethic ulcers, and specially applicable in torpid ulcerations following deep burns, contusions, and in varicose ulcers. Two illustrative cases are briefly given, in one of which he repeated the operation before getting final closure.—*Centbl. f. Chirg.* No. 14, 1888.

II. Osteoma in the Adductors of Cavalrymen (Rider's Bone of Billroth.) By S. W. Orlow. The author gives a case of a cavalry captain 37 years of age. The bone was removed from the upper end of the long adductor muscle. It had a mobile union of the pelvis. It was 5 cm. long, 3¼ wide at the base, and 1¾ thick. A microscopical description is given. He cites previously published cases making with this a total of 13 or 14. The most frequent seat so far, as stated is the long adductor and the pectineus (3 cases), next the adductor magnus (2 cases). But the bone may develop in tendons as well as in muscles. Traumatism (local blows, etc.), is mentioned as a cause in some cases.—*Wien. Med. Wchr.* No. 51, 1888.

William Browning (Brooklyn).

III. Contributions to the Study of Bacteria Found in Tumors. By H. Nepveu (Paris). The author discusses carcinoma bacilli, and asserts that he has found bacteria in the blood in cases of carcinoma of the rectum, with subsequent septic infection. In breaking down and softening of carcinoma of the mamma, following persistent eczema of the nipple, he has found cocci. In all these and similar cases the bacteria have penetrated from outward into the tissues, but do not bear any direct relation to the formation of the tumor itself, only in so far as their retention in the tissues for a long period of time leads to a condition of constant irritation, and may thus favor the development of new formations. The author does not assent to Scheurlein's view concerning the etiology of carcinoma. It will be remembered that the latter succeeded in producing pure cultures of bacilli and spores both from the serum scraped from carcinomatous masses, as well as from the growths themselves. These are claimed by S. possess peculiar characteristics. He succeeded in cultivating them upon agar-latine and afterwards inoculating the mammary glands of dogs with the same, The results obtained were striking, inasmuch as tumors were produced, characterized by wide-spread cell growth and granular cells, in which, as in carcinoma, the peculiar bright spores of Scheurlein were found. The theory advanced by N., however, in spite of the fact that he disclaims belief in that of Scheurlein, seems to contain a concession to that author's work. He believes that in the process of softening of the tumors the bacteria play an important role. In a case of fibroma of the popliteal space, with intact integument and no inflammatory appearances present, he found upon removal, in places where softening was in progress, cocci, attempts at cultivation of which gave no satisfactory result. The patient was discharged, but died five months afterward from a recurrence in the vertebral bodies, and compression of the spinal cord. [In all probability this case should be considered as a sarcoma] The author does not seem to be clear as to the origin of the bacteria as found in the structures of the growth, and states that the latter may have been, first a gland, into which the bacteria penetrated from the periphery at some previous time, or second, the bacteria may have been deposited there from the blood. In any event, it is only claimed that the bacteria, by their presence, lead to softening of the carcinomatus growths.—*Gaz. hebdom. de Med. et de Chir.* No. 18, 1888.

G. R. FOWLER (Brooklyn).

BONES, JOINTS, ORTHOPÆDIC.

I. **Case of Vertical Fracture of the Patella.** By DR. PAVEL S. GEIER (Kaluga, Russia). A soldier, when standing with his firmly planted right lower limb, semi-flexed at the hip and knee-joint, tried to drag up the thigh a very heavy sack of flour. Suddenly he felt an acute pain about the knee, and found himself unable to extend the extremity. When seem by Dr. Geier, two months after the accident, the man continued to suffer from pain about the joint, both on active and passive movement. When walking he was dragging along the limb, which remained slightly bent in the knee and adducted. Examination revealed an almost vertical fracture of the patella, running but slightly obliquely, and dividing the bone into two nearly equal halves. The fragments were separated, one of them being retracted upwards. Hence the bone seemed to be enlarged in the longitudinal diameter. They could be, however, brought into immediate contact. The author has been unable to find in literature another instance of a vertical fracture of the patella. [Still the case, though exceedingly rare, is not unique, as may be seen from Dr. E. Guilt's paper in Eulenburg's—*Real Encyclopædia*, Vol. vii, p. 490.—ED.]

Another point of great practical interest consists of the fact that the injury had been caused not by a direct violence, but by a powerful muscular effort (evidently by a forcible contraction of the quadriceps, the patella being fixed by the ligament). Nothing is said about the treatment adopted, or result thereof.—*Proceeding of the Kaluga Medical Society*, Feb. 1889.

II. On Operative Treatment of Ankylosis at the Hip-Joint. By WILHELM TH. LINDENBAUM (Iaroslavl Russia). The author details four cases, of which two refer to children of 11 and 8, with one-sided ankylosis of the hip-joint. In both, Volkmann's subtrochanteric osteotomy was performed with satisfactory results. A third patient, a girl of 13, had double ankylosis caused by her having been bed-ridden for 3 years (in consequence of articular rheumatism). The author resorted to osteotomy on one side, and to a total resection of the joint on the other. The girl became able to walk without any support, and even to run about. The fourth case is that of a lad of 18 who had remained in an utterly helpless condition for five years, in consequence of his having double rectangular ankylosis, both of the hip and knee joints. Four operations were successfully made, first of all, resection of one knee-joint; 6 weeks later, resection of the other; 2 months afterwards, supratrochanteric osteotomy of the left hip (securing a movable joint), and resection of the other (at one sitting). The patient (who is still under observation) soon commenced to walk.—*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, Nos. 2 and 8, 1889.

VALERIUS IDELSON (Berne).

III. The Treatment of Congenital Dislocation of the Hip. By EMIL MARTIN (Halle). The treatment of double congenital dislocations of the hip is very unsatisfactory; but little can be done, except by the use of corsets which push the head of the bone downwards; even these accomplish but little. Resection of the head of the bone has given fairly good results. In the unilateral form of the disease Volkmann has had excellent results with the following mode of treatment: He tries to obtain a permanent abduction of the limb; this naturally causes a tilting of the pelvis on the affected side, hence a lengthening of the limb, which compensates in a measure for the disturbances in the growth of the bone; moreover, he seeks to obtain a strengthening of the muscles and ligaments so as to give the head of the bone a fixed position; lastly, he places much stress on the general treatment of the patient.

Volkmann's method has the advantage of not interfering with the education of the child, as most of the treatment is conducted at night.

The change in the position of the head of the bone is obtained by extension by weights. This extension must be so strong that in the recumbent position the shortened limb appears the longer, and thus over-correction is obtained. This over-correction is important, for later on a portion of the abduction is lost. The extension is applied in the ordinary way, and a weight of 4 or 5 kilos is used for very young subjects, and being sometimes increased up to 7 and 8 kgms. The children soon become accustomed to it. Later on this is replaced by an extension gaiter reaching above the kneee. The children at the beginning of the treatment must be put to bed early and get up late, so that extension may be applied for some hours. In some of Volkmann's cases the extension at night has been kept up for 10 to 15 years.

By day the child is allowed to go about as much as it wishes without any form of apparatus.

The strengthening of the muscles and ligaments is accomplished by daily massage.

For the general health, the child is put on a nourishing diet, one that will prevent the formation of superflous fat. Morning and evening gymnastics are advocated. Nothing can be expected from a resection, as it only increases the shortening.—*Deutsche Med. Woch.*, No. 16, 1889.

F. C. HUSSON (New York).

IV. Treatment of Pott's Disease and Vertebral Fractures. By H. C. WOOD, M. D. (Philadelphia). At his recent clinics in the University Hospital the author suggested and exemplified a novel method of carrying out an old indication of the treatment of injuries of the vertebral column, which seems to us to have so much of promise as to be worthy of extended trial by the profession. Many years ago, even before the memoir of the late Prof. J. K. Mitchell, of the Jefferson Medical College, with its numerous quaint illustrations, members of the profession recognized that the great indication in the treatment of Pott's disease is extension and removal of the superimposed weight from the diseased vertebra. Various devices for meeting this indication of extension have been from time to time suggested, and the value of the plaster jacket as a means of making permanent the temporary extension gained by hanging up a patient is universally recognized. The effectiveness of this jacket depends upon the fact that the general shape of the human body is that of two opposed cones, which are placed in such a position that the base of one is the shoulders, and that of the other the pelvis.

Dr. Wood's suggestion consists in using the upper cone of the body as the basis for support. In other words, the plaster jacket is made with loops over the shoulder, and by means of the ordinary tripod, Mitchell's chair, a properly constructed wheel-crutch, or other device suited to the individual needs, the patient is suspended in the jacket. Dr. Wood showed in his clinic that an upward pull upon the jacket of 80 pounds did not disturb its position, even when the pulling had steadily been maintained for several hours, and that the pressure was uniformly spread over the surface, so that no pain or discomfort was caused.

In order to make the extension as complete as possible. it has been found advisable to add to the jacket an ordinary head strap, so that when the patient is supported there is some pull upon the head as well as upon the jacket, care being exercised not to draw up the head sufficiently to cause discomfort.

In a case of a man suffering from syphilitic caries in the middle dorsal region, the results of the treatment have been very brilliant. At the first clinic the paraplegia was so nearly complete that the patient could not cross his legs when lying in bed for one week; at the second clinic, after treatment by the jacket, he was able to walk by simply aiding himself with some light support of the hands. At the same time there was great relief of pain in the back, and great increase of the bodily comfort. Dr. Wood, in his last clinic, further suggested the advisability of frequently changing the spinal jacket and putting it on each time after the man had been hung in the old jacket several hours' so as to get a progressively increased extension, and to hold such extension as obtained. In this way it was thought that in long-continued cases the spinal deformity might be reduced to a minimum.

A further use of the method was suggested in the treatment of fracture of the vertebral column. By a long-continued suspension of the body, there would be a chance of more or less rectification of the line of the vertebra, and by elevating the head of the bed in which the patient lies, and fastening the jacket to the head-board, a perpetual extension could be maintained, which would continuously drag upon the spinal muscles and the displaced fractured ends of the bone, and by bringing back normal relations prevent degeneration of the spinal cord. When in any such case there is reason to believe that there has been a large injury of the spinal membranes, Dr. Wood advised an immediate operation and removal of clots, and then placing the patient in the extension apparatus. Dr. Wood further stated that in the nervous clinic at the University Hospital cases of the fractures of the vertebra are very frequent; but they are invariably of such date that no relief can be provided. The method of suspension was tried on a man in which the injury had occurred about seven weeks before, but no yielding of the bones was apparent and no relief was obtained. It was also noted that the prolonged inclined position was well borne by the patient, excepting that the circulation in the feet from lack of tone in the vessels became excessively bad, resulting in intense congestion and great swelling, and even much dropsical effusion.

Several methods of making the loops in the spinal jacket have been tried, but the one which was first suggested has proved most satisfactory. It is as follows:

After the first layer of the jacket is upon the patient, a piece of webbing, linen bandage or other strong material, well wet, has one end applied to the lower edge of the jacket, in front and to one side. The webbing or bandage is then carried up over the shoulders, upon which it rests very loosely, and brought back of the jacket to the lower edge. A smaller bandage is then put upon the opposite side of the jacket; then the external layers of the jacket are put in place. In this way the strips which are used for the shoulder loops are so incorporated with the jacket that they cannot be pulled out; at the same time there is no tendency for the jacket to be broken or crumpled up when the extension is applied.

If from tenderness of the projecting vertebra, or from the presence of a wound, surgical or otherwise, it is desired either to avoid pressure upon the vertebra, or to have access to the affected part, all that is necessary is to cut an opening in the jacket immediately over the diseased portion of the body, care being taken that this opening shall not be so large as to interfere with the strength of the jacket —*Therapeutic Gazette*, Feb. 1889.

V. On the Treatment of Spina Bifida by Extirpation with Osteoplasty. By Dr. VLADIMIR N. ZENENKO. (St. Petersburg.) The author communicates a case of sacral meningo myelocele in a boy, æt. 15 years, where he made complete extirpation of the tumor, with the transplantation of bone for filling up the osseous defect. From the patient's early childhood, the hernial sac had been bursting from time to time, to discharge large amounts of the cerebro spinal fluid (about 300 cc. in a few hours) and to gradually fill up again. On examination, the boy was found to be exceedingly emaciated, and to suffer from incontinence of the urine and fæces; he was unable to walk or stand on account of extreme wasting of the muscles of his lower limbs, and flexory contractures in the knee joints. The tumor measured 32 centimetres in diameter and 9 cm. in height, and contained thick loops of the cauda equina; it protruded through a defect measuring $3^1/_2$ cm. in breadth in its upper part and somewhat narrowing downward, the gap arising through the separation of the arches of the first and second dorsal vertebræ. The patient's condition being utterly helpless and hopeless, the operation was undertaken without delay. Having extirpated the tumor, including the central portion of the integuments, and the said loops of the cauda, the author carried 2 longitudinal incisions along both sides of the defect, down to the bone, and then split off, by means of a gouge, 2 osseous bridges consisting of the rudiments of the arches and posterior tubercles of the sacrum and measuring each about 2 cm. in breadth. The aponeurosis having been dissected, the bridges could be easily brought in direct contact, and the parts closed with sutures (3 *etage* ones). Except a small central area, the wound healed *per primam*. Four months later the boy was up and about in excellect state. His general health strikingly improved; the contractures and muscular atrophy disappeared; his micturition and defecation became normal; he was able to walk and even to run about without any fatigue. The posterior aspect of the sacrum represented a fairly smooth, equally hard surface showing no tenderness on pressure. He remained in this condition ever since the operation (a year had elapsed). Discussing his very instructive case and reviewing the subject in general, Dr. Zenenko lays stress especially on the following points of importance:

1. The mortality from spina bifida is truly enormous. Thus, of 32 cases of the defect which have been observed in the St. Petersburg Foundlings' Home during 1871–87, as many as 30 ended in death in the course of a few first months of life, and only 2 survived a year. Prof. R. Demme states that of 57 cases admitted to Zenner's Hospital in Berne, 32 remained without treatment; every one of them died, having survived but a few months.

2. In view of such a terrible mortality, surgical treatment is imperatively indicated in all cases coming under observation, which postulate holds true not only in regard to meningocele, but also in regard to meningo myelocele, more especially when the latter is situated about the lower part of the sacrum.

3. The most rational plan is constituted by a complete extirpation of the sack with same plastic procedure for covering the defect.

4. In the presence of osseous defect, an osteoplastic operation is fully justified, which should consist in the transplantation of osseous bridges derived from rudimentary vertebral laminæ or from lateral areas of the posterior surface of the sacrum.

5. The removal of the nerve branches present in the hernial sac ap-

parently does not cause any discernible disturbances in the functions of any organs. At all events, no derangements of the kind are observed after the removal of the tumor of long standing, situated it the sacral region.

6. A complete restoration of the vertebral canals as secured by the osteoplastic operation, seems to remove all functional disturbances dependent upon the defect under consideration.

7. Of all other methods of treatment of spina bifida, the puncture is most unreliable as well as most dangerous, since it is apt to cause purulent inflammation of the meninges, with lethal issue; while Mayo Robson's plan (complete extirpation with closing the defect with soft parts) is most rational. It proved successful also in Dr. Zenenko's hands in a case of an adult man with occult sacral meningo myolocele —*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, No. 2 and 8, 1889.

VI. Experimental Contribution to the Pathogenesis of Joints. By PROFESSOR S. A. PAVLOVSKY (St. Petersburg) According to the author's experiments, an intra-articular injection of cultures of tubercle bacillus is followed about a fourth day by congestion of cartilage and synovial membrane. About the sixth day the membrane becomes rough and grayish, while there appears sometimes serous effusion into the joint and swelling of the the adjacent lymphatic glands. About a twelfth day, the joint becomes distended (with the fluid) and the peri-articular cellular tissue œdematous. By the end of 3 weeks, there develops suppuration of the articulation with granulations over the synovial membrane. The microscope shows that the tubercle bacilli spread on along lymphatic slits and connective tissue cells. The general system is protected from the infection by the work of a whole zone of lymphatic glands.—*Vratch*, No. 3, 1889.

VALERIUS IDELSON (Berne).

VII. The Pathology and Therapy of Paralytic Hip-Joint Dislocations. By Dr. KAREWSKI (Berlin). The remarkable cases of real spontaneous dislocation of the thigh as a result of infantile paralysis, which were first described by Verneuil and Reclus are of special interest for the explanation of the paralytic contractures.

The author had occasion to observe two children soon after an attack of acute poliomyelitis and to watch the development of the contractures and the dislocation.

The first case a child æt. 1½ years, was brought to the doctor, 7 months after he had suffered from infantile paralysis, on account of a peculiar position of the left leg. Since the day of the paralysis the extremity was in permanent extreme flexion, external rotation and abduction. It was not possible to extend the leg even when much force was used. The head of the femur was in the articular cavity. As the child was in too bad a condition for orthopædic or operative treatment, it was put under electricity, and massage and general building up, with much improvement to the general health, but when the child was examined six months later a subpubic dislocation was found to have taken place.

Another case of the same disease in a child æt. 1 year, ran a similar course, and on examining it six months later, the head of the bone was found on the ramus of the pubis. In the two children there were exactly analogous changes in the muscles of the thigh, contracture of the tensor vaginæ femoris, and the quadriceps; the psoas-iliacus, the external rotators and the flexors of the thigh still retained their functions; extinction of movements of the abductors and extensors. In both cases, the reposition of the head of the bone could not be made even under anæsthetics. The extensors and abductors did not react to the induction current, whereas the glutei, the psoas-iliacus, the sartorius and the flexors gave a distinct contraction.

As both of these cases had never attempted to walk but had remained lying down or had been carried, therefore none of the causes which explain the deformity at the hip-joint could be responsible, and there can hardly be any question that the weight of the back or of the limb could have caused the deformity. It is very probable that the healthy muscles by their contraction must have caused the dislocation. The line of contraction of these muscles is such as to produce the above mentioned position. The deviation of the thigh below and outside of the articular cavity would come in the second place through the loosening and widening out of the capsule of the joint which occurs in this place as a result of the paralysis of the abductors, and moreover favored by the weight of the thigh which pulls in the same direction. The dislocation would then be fixed by the contraction of ilio-femoral ligament and the healthy part of the capsule, and also by the permanent contracture of the healthy muscles.

The poor results which simple orthopædic treatment gives in these cases is sufficient reason for operative interference. In the first case, open section of the contractured muscles was undertaken; the tensor vaginæ femoris, the rectus the psoas-iliacus and a few fibres of the vastus externus had to be divided before it was possible to extend the leg. Reposition of the head of the femur could not be made, and the leg was maintained in adduction and extension by permanent wearing of a plaster bandage which extended from the sole of the foot to the axilla.

The child learned to run around (by use of a machine and elevation of the healthy leg) and can now, one year after the operation, go about fairly well. In the second case, operative interference was more successful.

By means of Hueters anterior incision the joint was exposed. After dividing the muscles which cover the capsule of the joint anteriorly it was not possible to bring the head into the cavity because the trochanter major was firmly wedged in the latter, and the ilio-femoral ligament and the lateral parts of the capsule were much shrunken; only after the muscles attached to the trochanter had been divided and the capsule incised could the normal relations be restored. This confirmed the correctness of the above theory.

The joint could not be closed and the muscles were fixed as firmly as possible over it. The healing process went on smoothly, and permanent extension of both legs secured a thorough abduction of the paralyzed extremity.

On the 14th day passive motions were begun, the head of the bone remained in the cavity and was perfectly movable. In two months the child went about with a machine, and now, four months after the operation, has excellent use of his limbs, a much better result than if myotomy alone had been employed.—*Deutsche Medicinische Wochenschrift*, No. 6, 1889.

F. C. HUSSON (New York).

VIII. Old Hip-Disease. Formation of Phosphatic Calculi Around Carious Bone in the Bladder. Attempted Suprapubic Lithotomy. Death. By ARNOLD LYNDON, M.B., Lond. (London). The chief points in this interesting case are as follows: A man æt. 27, was admitted into St. Bartholomew's hospital, May 20, 1887, with symptoms of stone in the bladder and with the signs of old hip-disease (16 years ago) in the right hip-joint. On sounding, an "apparently large and fixed stone was felt." Lithotomy was performed and repeated on two other occasions, giving considerable but temporary relief. Careful examination of the fragments showed them to be made up of calcium phosphate, a little ammonium urate and some carious cancellous bone. Patient re-admitted Nov. 25, 1887, again sounded; rough projecting surface felt on right upper wall of bladder. Suprapubic lithotomy was attempted but had to be abandoned, as on opening the abdominal wall in the usual place it was found that the finger passed directly into the general peritoneal cavity, the bladder being everywhere covered with peritoneum and firmly bound down to the back of the pubes by adhesions. Median perineal lithotomy was performed instead, and the patient died four days after from vomiting and anuria.

Post-mortem, a sinus was found leading direct from the perforated acetabulum into the bladder which was drawn by inflammatory adhesions to the right of the middle line. The right ureter was much compressed by these adhesions whilst above them it was dilated and filled with muco-pus, right kidney full of pus, dilated and containing many cysts. Left kidney small and contracted.

The course of events seems to have been as follows: As a result of the hip-disease 16 years ago, a sequestrum from the acetabulum instead of being cast off externally, gradually and slowly found its way into the bladder where it set up cystitis which in its turn brought about the deposit of phosphates and the formation of the calculus. Extravasation of urine from the bladder was prevented by the inflammatory thickening around the opening.

Mr. Lyndon points out in concluson how an asymmetrical distension of the bladder may in future contraindicate suprapubic lithotomy by suggesting the presence of adhesions of the bladder to surrounding structures. Two other somewhat similar cases are also recorded.—*Ill. Med. News*, Dec. 15, 1888.

IX. Method of Irrigating Abscess Cavities after Hip Disease. By C. B. KEETLEY, F.R.C.S., (London). The author describes an apparatus he devised for the above purpose and which proved satisfactory. It "consists of a rectangular wooden frame, hollow on the under side to permit a receptacle for the waste irrigation fluid to be slipped beneath. Four pieces of stout canvas are buttoned across it. By removing one of these the apparatus can be arranged for irrigation of either the hip, knee or ankle. The wooden frame is placed on the bedstead, the whole length of which it covers; no bedding or mattress being used except blankets beneath and over the patient."—*Ill. Med. News*, Nov., 88.

X. Dislocation of the External Semilunar Fibro-Cartilage of the Knee-joint. By RICKMAN J. GODLEE, M.S., F.R.C.S., (London). The specimen illustrating this rare accident is taken from the museum at University College. The external fibro-cartilage has been torn away from its attachment to the capsule of the joint and is now placed vertically in the intercondyloid fossa and evidently flattened from the pressure of the condyles. The only other change observed in the joint was a slight roughening over the cartilage of the external condyle and corresponding part of the tibia, a part which would have been protected by the fibro-cartilage when normally placed. The capsule of the joint was healthy.

In most cases complete recovery seems to occur and the patients can use their limbs. In some of the cases a projection (probably due to the fat in the alar ligament pushed forward by the cartilage) has been noticed on one or other side of the patellar ligament and generally on the inner side.

From the anatomical point of view it would seem that the external fibro-cartilage is the more likely to be displaced for it is much less extensively attached to the capsule of the joint than the internal and this attachment is still further diminished by the way the tendon of the popliteus is inserted. It appears, however, that the internal cartilage is the more often displaced. The commonest form of injury causing the accident appears to be a twist inward of the foot "when the external cartilage is drawn already well towards the inner part of the outer condyle of the femur, a sudden jerk or twist might force it still farther and cause it to pass actually outside the circumference of the cartilage."—*Ill. Med. News*, Sept., '88.

J. ANDERSON SMITH (London).

GYNÆCOLOGICAL.

I. Intestinal Occlusion Following Ovaritomy. By WOLF HIRSCH. The author has collected 14 cases of intestinal obstruction following ovaritomy. The occlusion may occur, 1, directly by the bowel being drawn into the abdominal wound by the raising and securing of the pedicle, the cicatricial shrinking of the parts occluding the bowel. 2. Indirectly by fibrous bands of connective tissue arising from the integument of the abdominal wall, which, during a sudden exertion while the bowel is distended, produces an angular obstruction, or "kink" in the intestinal lumen. 3. In a purely mechanical manner by the kinking of a loop of bowel during the operation, or is strangulated directly in the extra-peritoneal treatment of the pedicle.

The time of the occurrence of the obstruction varies from several hours to a number of years after the operation. Olshausen reopened the abdomen 21 days after the ovaritomy and relieved the obstruction. This method of treatment offers the only hope of relief in this class of otherwise hopeless cases. This accident is of far less frequency since the introduction of the intra peritoneal method of treating the pedicle.—*Arch. fur Gynækologie*, Bd, 32, hft. 2, p. 247.

GEO. R. FOWLER (Brooklyn).

II. **Severe Traumatic Injuries to Female Genitals.** By Serghei K. Olenin, (Tambov, Russia). The author details the following two noteworthy cases:

1. A well made married (multipara) peasant women, aged 45, suffering from occasional incomplete uterine prolapse for many years past, was hastily getting down from the top of a haystack and forcibly came down on the handle of a rake which penetrated into her vagina about as deep as 2 1 2 inches. The stick was at once withdrawn by some people close by, which was followed by profuse bleeding, acute pain, frequent vesical tenesmus and retention of urine. When admitted to a local hospital, a few hours later, she was considerably exhausted from hæmorrhage which was then going on. The vagina was washed out and plugged with iodoform gauze. On the next day, there supervened high distension and tenderness of the abdomen, rectal tenesmus, general restlessness and anxious expression of the face. The womb (together with the anterior wall of the vagina) being brought outward by bullet forceps, there presented itself a lineal, fairly clean cut wound measuring 2 cm. in length and situated longitudinally on the median line 4 cm. above the inlet. It proved to penetrate into the vesico-uterine space; the uterus and bladder, however, were intact. The wound was closed with 4 silk sutures, the womb returned, and the vagina plugged as before. In the course of a few days general peritonitis of a very severe character developed, associated with cerebral symptoms. In spite of that, the woman was taken home on the 7th day after the accident and was lost out of sight.

2. A burghess girl, æt. 15 years, when walking on a street, was attacked from behind by a cow which dealt a blow with a horn which passed between the girl's thighs, A very profuse bleeding followed, accompanied with acute pain about the perineum. When seen, an hour later, the patient was exceeding pale, excited, covered with viscid cold sweat and suffered from retching. On examination there was found an irregular lacerated wound which occupied the lower half of the hymen, posterior commissure, the whole perineum, outer sphincter ani, and a lower portion of the vagino-rectal wall. The anus was widely gaping permitting the sight of fæcal matter blocking up the

rectum. The parts were washed out with boracic lotion, the girl brought under the influence of chloroform, the much crushed edges of the laceration nicely pared off, and the wound closed with 19 sutures (4 vaginal, 3 perineal, 12 rectal). On the 4th day, suppuration about the rectum appeared. Ultimately, the first intention could be obtained only in the vagina and anterior parts of the perineal wound, while the rectal one healed through cicatrization which left a permanent gaping of the anal orifice. The patient, however, was able to retain both hard and fluid fæces and even gases, and generally recovered without any permanent uncomfortable sequelæ.—*Proceedings of the Tambov Med. Soc.*, No. 11, 1889.

III. **Obliteratio Vulvæ Rectalis.** By Dr. K. A. SILBERNIK (Lebedin, Russia). The author described a remarkable case of a peasant woman in whom puerperal necrosis of the vesico-vaginal septum had been followed by a complete destruction and cicatricial obliteration of the urethra, and the formation of a large vesico-vaginal fistula. The patient having become utterly unable to work on account of an incessant flow of her urine, the author resorted to Rose's operation—that is, he converted the fistula into a vesico-rectal one and closed the vulva with sutures. The results were most satisfactory. The woman became able to hold her urine for several hours and to resume her daily work, feeling altogether quite comfortable. When examined twelve months later, she continued to be in excellent state.

Analyzing his case as well as three cases of Rose and one of Schroeder, Dr. Silbernik comes to the conclusion that: 1. The operation is fully justified, since it frees the patient from unspeakable misery and at the same time enables her to return to work and earning her daily bread. 2. It does not manifest any injurious influence either on the uro-genital organs, or on the patient's general state. 3. The rectal opening should be made in the region of the internal sphincter of the bowel and to have a small size. The external sphincter is hardly able to effectively retain the urine flowing into the bowel. Meanwhile the external sphincter being necessarily in the state of tonic contractions, on one side allows a more or less retention of the urine in the bladder, and, on the other, prevents fæces escaping into the vagina or the bladder.

Referring to the case, Professor A. I. Lebedett, of St. Petersburg, says in *Vratch*, 1889, No. 4, that he has performed the same operation in three cases of his own. In one of them a calculus formed in the cloaca. In view of the drawbacks, the author resorted, in a fourth case of vesico-vaginal fistula, to a novel method of his own invention, consisting in a plastic restoration of the urethra with a consecutive introduction into the vagina of a special appliance preventing any involuntary flow of the urine.—*Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg*, Nos. 2 and 10, 1889.

VALERIUS IDELSON (Berne).

IV. A Method of Curiug Incontinence in Cases of Vesico-Vaginal Fistulæ With Loss of the Sphincter Vesicæ. By K. ISRAEL (Berlin). At a meeting of the Berlin Surgical Society, held January 14, 1889, Dr. Israel read a paper based on the following case:

Patient æt. 26 years was confined in April, 1886, after a difficult labor due to a transverse presentation. A few days after confinement the urine began to flow through the vagina. The patient was seen by the author twenty-three months after the accident, an unsuccessful operation having been performed in the meanwhile. Examination showed a large lozenge-shaped defect in the vesico-vaginal wall, which admitted three fingers in its transverse diameter, and begun about two fingers breadth below the anterior lip of the cervix, continued anteriorly in a total absence of the urethra vaginal wall, therefore, including the sphincters, part of the bladder and urethra. Of the urethra, there remained only a small narrow fold of mucous membrane, representing its upper wall, and a small ring 2 mm. wide at its lower circumference. Through the large defect in the vesico-vaginal wall the opening of the ureters in the bladder could be easily seen.

The author attempted to close the vesico-vaginal fistula by Simon's method, this failed completely, but the attempt at forming a new urethra, which was done at the same sitting succeeded perfectly. At a second operation he dissected up the vesical from the vaginal wall, and closed the bladder wound with cat-gut sutures, after having freshened up its edges, then the cicatricial vaginal flaps were united by wire and silk sutures, a tight tamponade of the vagina secured contact between the vesical and vaginal walls. The result of the operation was all that conld be desired, except that the incontinence was as great as ever owing to the absence of the sphincter versical. Dr. Israel tried a number of operations to obviate this condition, such as narrowing of the urethra, formation of mucous membrane valves in the urethra but all without avail. Knowing that people with a suprapubic fistula can enjoy life and that the walls of the fistula close through their own elasticity, or only a tight compress is needed to prevent the urine from flowing out, he resolved to obliterate the urethra and to make a permanent suprapubic fistula, though which the urine might be drawn by means of a catheter. This he did in May, 1888, by introducing a thick trocar into the bladder, just above the symphysis, leaving the canula in place and through it passing a Nelaton's catheter, which catheter, remained in position until the canal was formed, then the patient was taught to catheterize herself through the fistula. On July 28, he proceeded to obliterate the urethra by dissecting up the mucous membrane, sewing it up and bringing the urethral walls together by a purse string suture, after the healing of this operation the patient remained perfectly dry for a month, drawing her urine through the fistula every six hours, when a small urethral fistula formed and had to be closed by another operation. Since the last operation the patient has remained perfectly dry without even the use of any compress and draws off her urine every six hours.—*Deut. Med. Wochen.* No. 7, February 14, 1889.

F. C. HUSSON (New York).

V. The Anterior Fixation of the Retroverted Uterus.

By Prof. V. CZERNY (Heildeberg). Four cases are recorded in which the retroverted uterus after having been freed from its adhesions is anteverted and fixed to a wound made in the abdominal wall. In all cases, the result of the operation was lasting and satisfactory. In three cases after restoring the uterus to an anterverted position the operator removed both tubes and ovaries, these organs being the seat of marked disease. The removal of those organs must naturally detract from the value of the operation of fixation in these special cases. It is therefore impossible to conclude from them the value of the operation of simple anterior fixation of the uterus. The indication for the operation is not always clear. It is impossible to tell in advance the exact amount and nature of the adhesions. The Schulze or Thure-Brandt methods are still on trial. The author's methods consists in fixing the uterus by passing one or two cat-gut sutures transverely through the anterior uterine wall near the fundus. The sutures are passed on either side through the peritoneum and fasciæ at the borders of the abdominal wound near the inferior angle of the same (to avoid strain on the sutures). The sutures are then drawn tight, tied, cut short and sunk. The abdominal wound in then closed over them.—*Beitrage zur Klin. Chirg.*, Bd. iv, heft. 1, 1888.

HENRY KOPLIK (New York).

VI. Hydramnios Simulating Ovarian Tumor, with Pregnancy; Abdominal Section; Delivery per vias Naturales; Recovery. By H. A. REEVES (London); notes by G. H. BURFORD (London). The patient, æt. 21 years, was admitted with a large and rapidly increasing abdominal tumor. A month previously, being then four months pregnant, she had fallen down stairs; since then the distension of the abdomen had continuously developed. There also existed dyspnœa on exertion, inability to admit the recumbent position, and commencing œdema in the feet. The swelling continued to increase almost daily during the fortnight in which she was under observation in the hospital. A large pyriform mass, cystic and flutuating, occupied the left flank, and extended upward under the ribs. In the right flank was another cystic tumor, more rounded and smaller. Vaginal examination showed the usual signs of pregnancy. The patient's condition growing steadily worse, and the exact diagnosis being doubtful, Mr. Reeves decided to perform abdominal section. A long median incision was made, exposing a symmetrical tumor, which proved to be entirely uterine, blocking the pelvis and extending up to the ensiform cartilage. The abdominal wall could not be sutured with much traction. Dr. Holland dilated the os, ruptured the membranes and evacuated the uterus of several gallons of amniotic fluid, and twins of 4·5 months fœtal life. The uterus contracted the abdominal incision was at once freed from strain, and no uterine hæmorrhage ensued. The puerperium ran an ordinary course, but convalescence was delayed by anæmia. The patient was discharged to a convalescent home and ultimately made a good recovery.—*Brit. Med. Jour.*, July 21, 1888.

H. PERCY DUNN (London).